

USSN: 10/074,635
Atty. Docket No.: 2002B005
Amdt. Dated May 3, 2004
Response to OA mailed February 17, 2004

Amendments to the Claims:

The following listing of claims replaces all prior versions of claims in this Application:

Listing of Claims:

Claim 1 (currently amended) A method for printing a polyolefin film comprising the steps of:

- (a) blending a coloring agent with a polyolefin;
- (b) extruding said blend of step (a) onto a casting roll to form a colored extruded film comprising at least one polyolefin layer;
- (c) orienting said colored extruded film of step (b) in at least one direction to form an oriented film comprising at least one polyolefin layer substantially free of voids;
- (d) passing said oriented film of step (c) to a digital printer; and
- (e) passing a digital signal to said digital printer to cause indicia to be placed on the surface of the at least one polyolefin layer of said oriented film by application of a radiation curable ink onto the surface of the at least one polyolefin layer.

Claim 2 (original) A method according to claim 1, wherein said digital printer is an ink jet digital printer.

Claim 3 (currently amended) A method according to claim 2, wherein said ink jet digital printer applies UV curable ink to said ~~oriented film~~ at least one polyolefin layer, and wherein said UV curable ink is cured by applying ultraviolet light to the ~~ink-jet printed film~~ at least one polyolefin layer.

Claim 4 (original) A method according to claim 3, which is conducted in a continuous in-line operation, wherein the extruded film of step (b) is maintained in web form without being wound up into a roll until after said UV ink is cured.

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Claim 5 (original) A method according to claim 3, wherein steps (a), (b) and (c) are conducted in a single line operation where a roll of unprinted film is produced.

Claim 6 (original) A method according to claim 5, wherein steps (d) and (e) are conducted in a single packaging or labeling line operation, wherein said roll of unprinted film is unwound; steps (d) and (e) are conducted to form a printed, unwound film; and the printed, unwound film is converted into packages or labels without being rewound into a roll of printed film.

Claims 7-9 (canceled)

Claim 10 (currently amended) A method according to claim 1, wherein the at least one polyolefin layer film is coated with a primer selected from the group consisting of a polyethyleneimine and epoxy resins prior to the application of a radiation curable ink onto the surface of the at least one polyolefin layer ~~being coated with said print enhancing coating.~~

Claim 11 (new) The method of claim 1 wherein the at least one polyolefin layer is a skin layer that comprises the coloring agent and an opaque core layer is coextruded with the at least one polyolefin layer.

Claim 12 (new) The method of claim 1 wherein the at least one polyolefin layer is a skin layer and an opaque core layer is coextruded with the at least one polyolefin layer and a transition layer comprising the coloring agent is coextruded between the at least one polyolefin layer and the opaque core layer.

Claim 13 (new) A method for printing a polymeric film comprising the steps:

(a) obtaining a polymeric film comprising:

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(i) an opaque core layer comprising a thermoplastic material, said core layer having a first side and a second side,

(ii) a first polyolefin skin layer comprising a coloring agent, wherein said first skin layer is adjacent to the first side of the core layer, and

(iii) wherein each layer of the film is substantially free of voids;

(b) passing the polymeric film to a digital printer; and

(c) passing a digital signal to the digital printer to cause indicia to be placed on the surface of the polyolefin skin layer of said oriented film by the application of a radiation curable ink onto the surface of the polyolefin skin layer.

Claim 14 (new) The method of claim 13 wherein the core layer of the polymeric film comprises from about 1.5% to about 15% by weight of TiO_2 .

Claim 15 (new) The method of claim 14 wherein the core layer comprises isotactic polypropylene.

Claim 16 (new) The method of claim 14 wherein the core layer of the polymeric layer comprises a material selected from the group consisting of high density polyethylene and linear low density polyethylene.

Claim 17 (new) A method of claim 13 wherein the polymeric film printed comprises a first transition layer comprising a thermoplastic material, the first transition layer having a first side and a second side, wherein the second side of the first transition layer is adjacent to the first side of the core layer and is disposed between the core layer and the first polyolefin skin layer, and wherein each layer of the film is substantially free of voids.

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Claim 18 (new) The method of claim 17 wherein the film printed further comprises a second polyolefin skin layer having a first side and a second side wherein the first side of the second skin layer is adjacent to the second side of the core layer.

Claim 19 (new) The method of claim 17 wherein the film printed further comprises a second transition layer having a first side and a second side wherein the first side of the second transition layer is adjacent to the second side of the core layer and a second polyolefin skin layer having a first side and a second side wherein the first side of the second skin layer is adjacent to the second side of the second transition layer.

Claim 20 (new) The method of claim 18 wherein the second skin layer of the film printed comprises a coloring agent.

Claim 21 (new) The method of claim 19 wherein the second skin layer of the film printed comprises a coloring agent.

Claim 22 (new) The method of claim 13 wherein the first skin layer of the film printed has a percent opacity less than about 40% and a percent light transmission greater than about 65%.

Claim 23 (new) The method of claim 17 wherein the combination of the first skin layer and the first transition layer in the film printed has a percent opacity less than about 40% and a percent light transmission greater than about 65%.